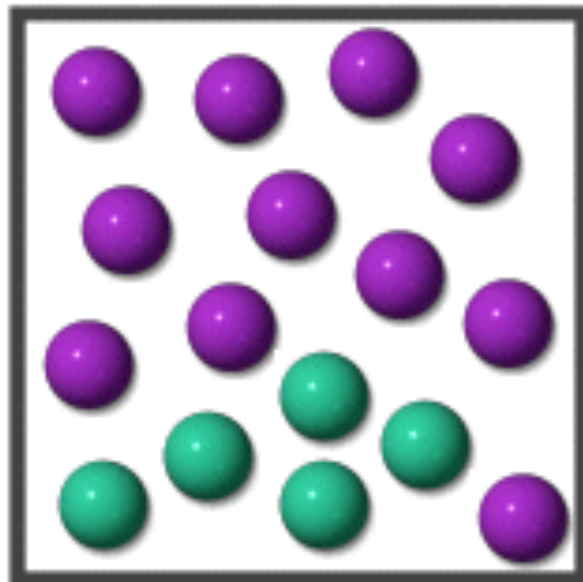
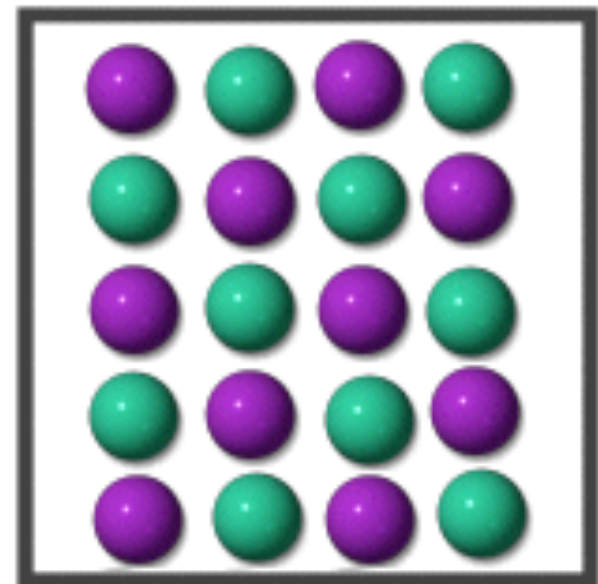


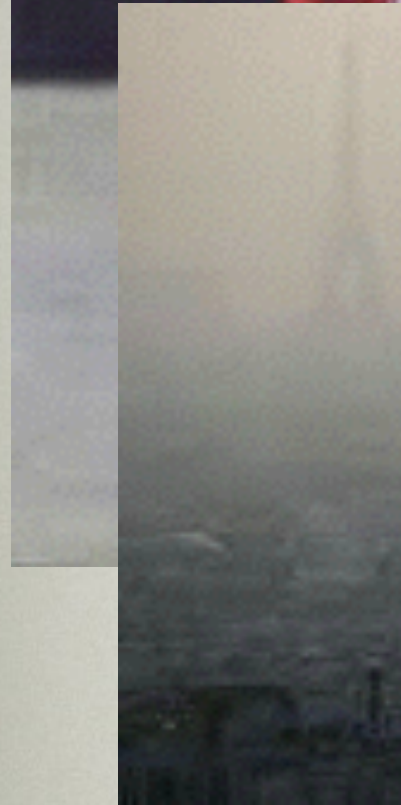
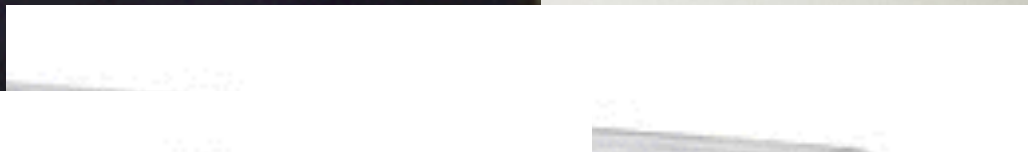
Mixture

Heterogeneous
Mixture



Homogeneous
Mixture





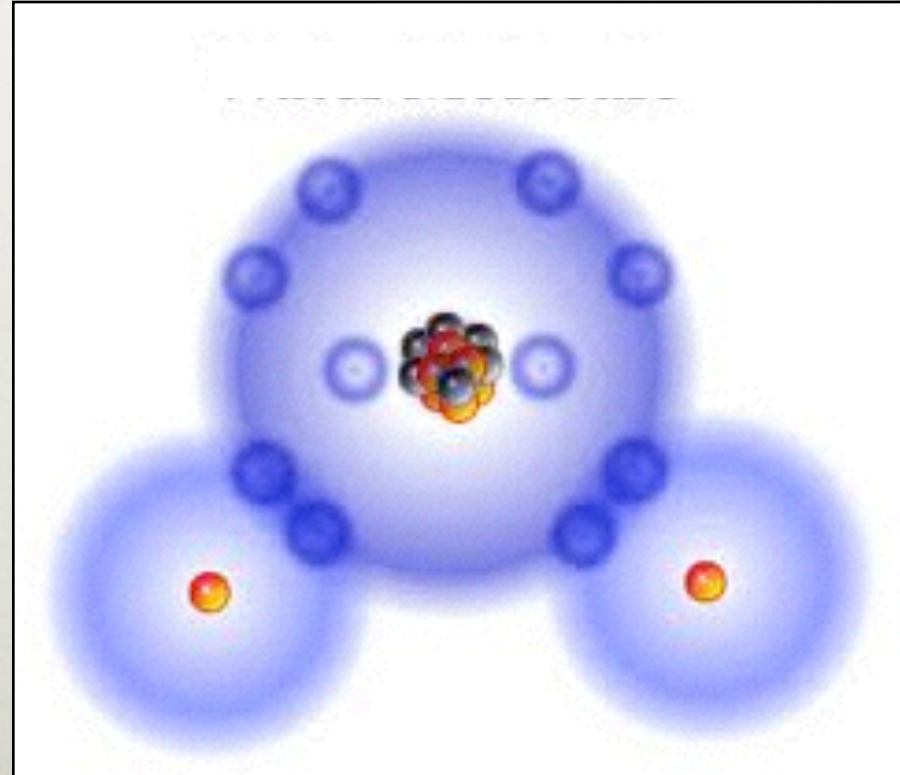
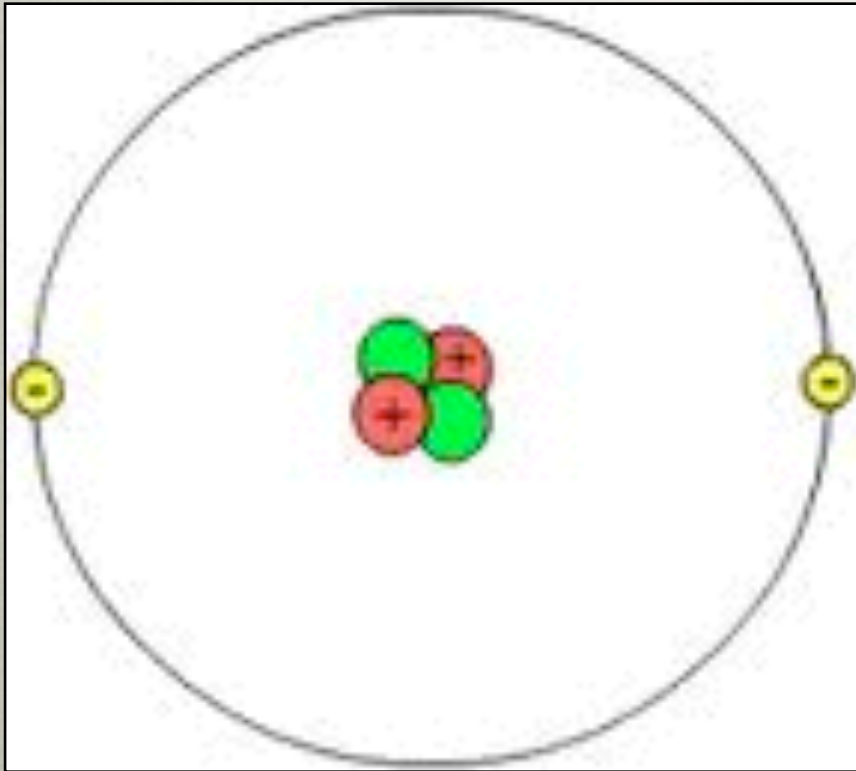
Matter and Classification

All Matter can be classified into 1 of 2 groups:

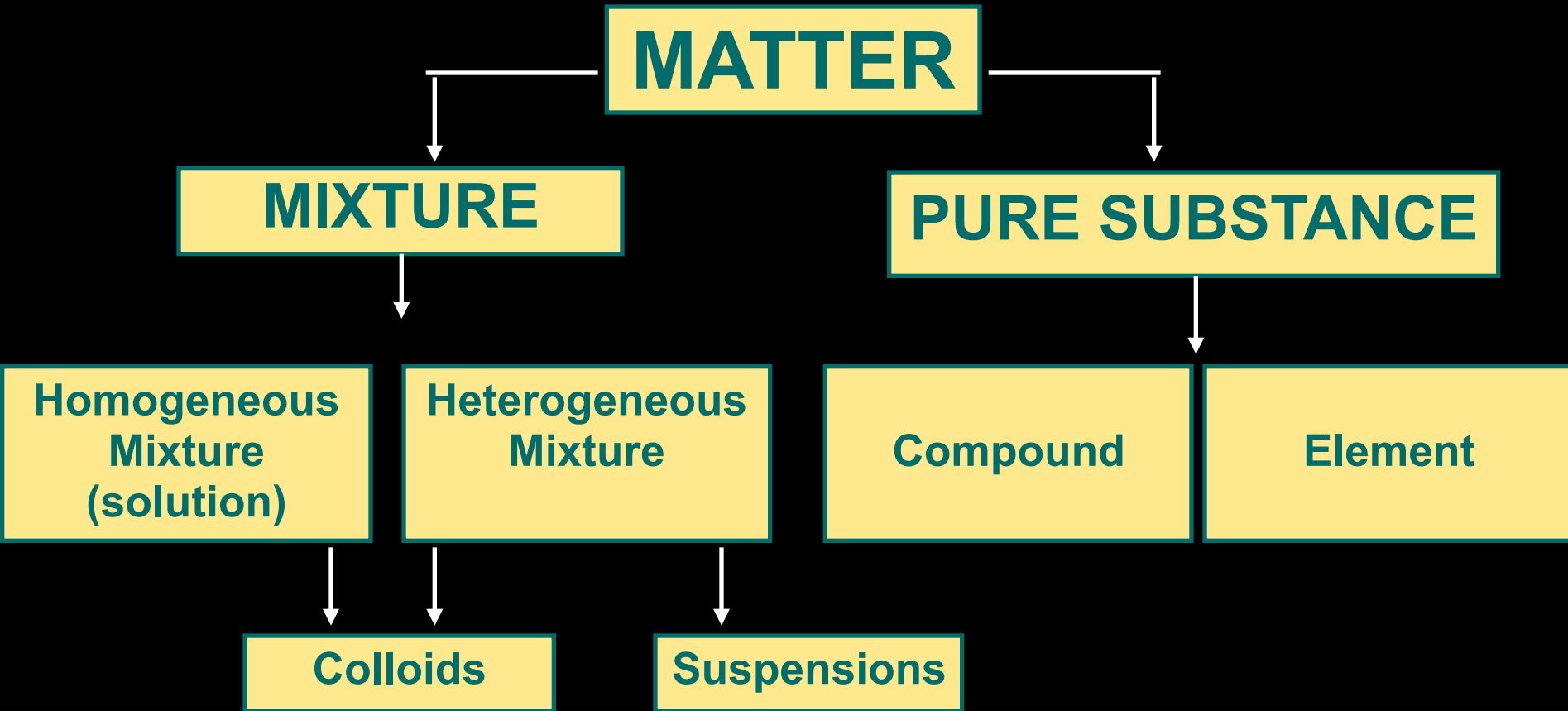
- Pure Substances
- Mixtures

IMPORTANT CONCEPT

ATOMS vs MOLECULES

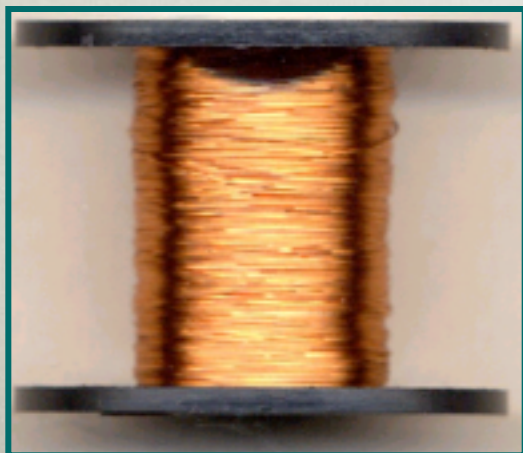


Matter Flowchart



PURE SUBSTANCES

- Element
 - composed of identical atoms
 - EX: copper



PURE SUBSTANCES

- Compound
 - composed of 2 or more elements bonded together
 - EX: table salt (NaCl)



MIXTURES

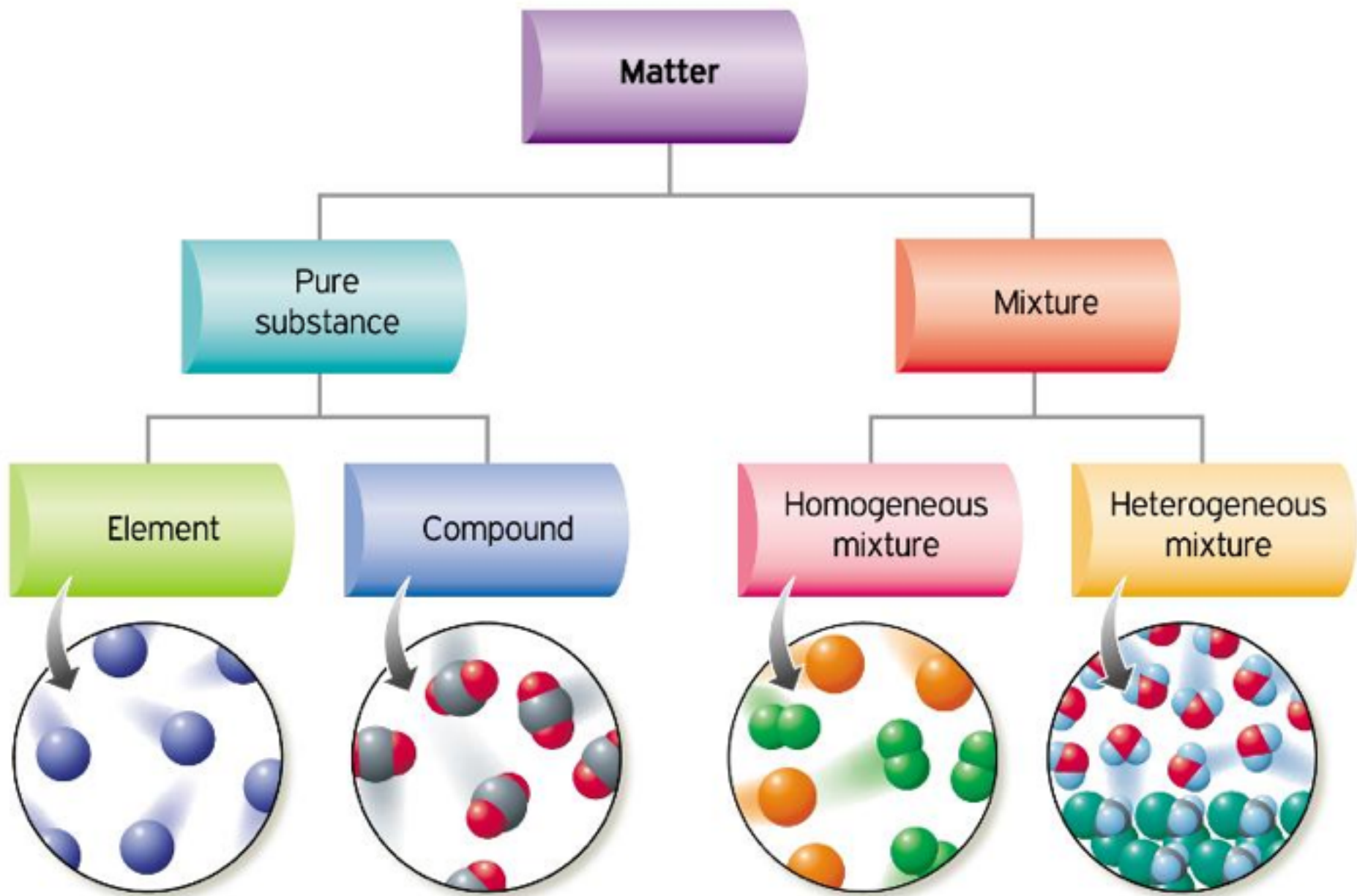
- **Variable combination of 2 or more pure substances.**
-



Heterogeneous Mixture



Homogeneous Mixture



MIXTURES

Solution

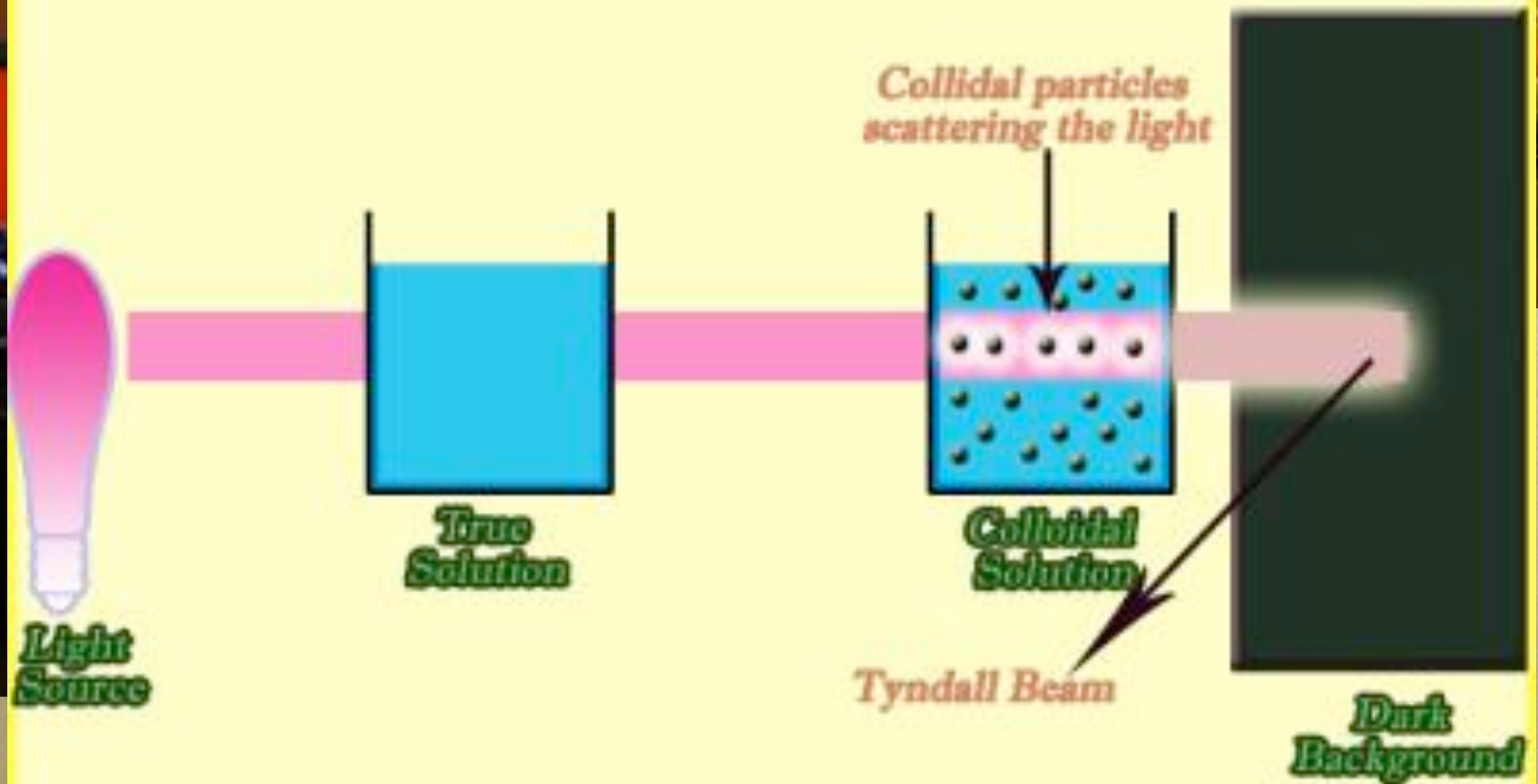
- homogeneous mixture
- very small particles
- particles don't settle
- EX: rubbing alcohol



MIXTURES

- Colloid
 - heterogeneous
 - medium-sized particles
 - particles may settle over time
 - EX: milk





FARADAY TNYDALL EFFECT

MIXTURES

- Suspension
 - heterogeneous
 - large particles
 - particles settle
 - EX: freshly-squeezed lemonade



Summary

<i>Solution</i>	<i>Colloid</i>	<i>Suspension</i>
<i>No Tyndall</i>	<i>Tyndall</i>	<i>Tyndall</i>
<i>no Filter</i>	<i>no Filter</i>	<i>Filter</i>
<i>Small pariticles</i>	<i>Medium particles</i>	<i>Large Particles</i>
<i>Salt Water</i>	<i>Milk</i>	<i>Lemonade</i>

Matter Sample

Is the % composition the same throughout?

Yes

No

Heterogeneous Mixture

Is it made of more than one substance?

Yes

No

Homogeneous Mixture

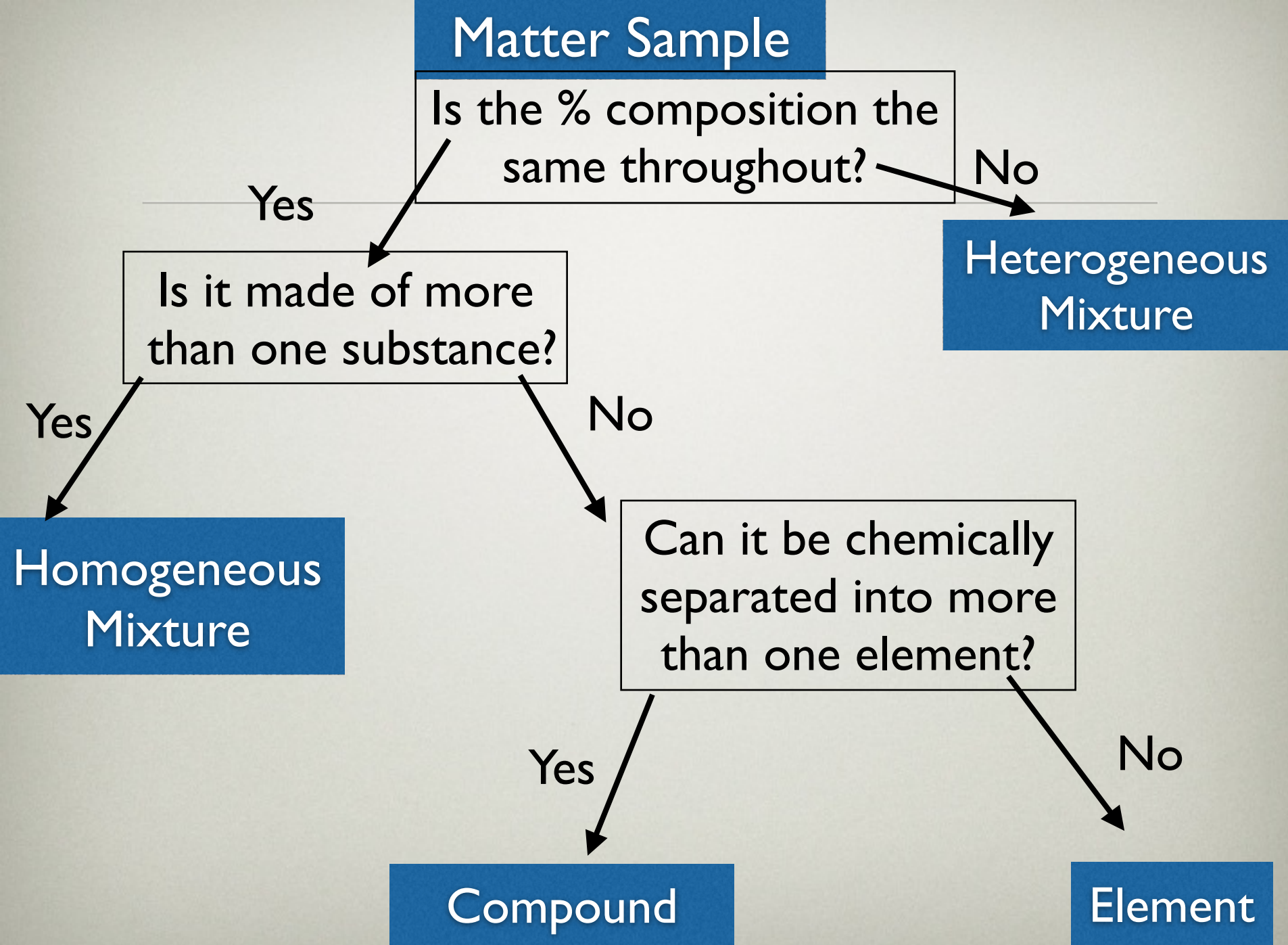
Can it be chemically separated into more than one element?

Yes

No

Compound

Element



<https://www.youtube.com/watch?v=VBReOjo3ri8>

- <https://www.youtube.com/watch?v=UV8KbQyF228>

CLASSIFYING MATTER

- **Examples:**

- graphite element
- pepper hetero. mixture
- sugar (sucrose) compound
- sugar water homog. mixture
- soda mixture